Bredehoft, Deborah

From: Lloyd, David [DLloyd@tpicomposites.com]
Sent: Friday, August 09, 2013 6:05 PM
To: Salisbury, Demetra; Bredehoft, Deborah
Cc: becky.wehrman@gmail.com
Subject: FW: TPI Iowa LLC - IAR000510156 Additional information
Attachments: Appendix 1 HW Manifest Summary.pdf; Appendix 2 RCRA Online 12959 addressing MPUs.pdf; TPI One Plan Emergency Action Plan with Appendices.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Demetra and Deborah-

Below and attached, please find the additional information that was discussed during our recent meeting. If you have any questions or require additional information please do not hesitate to contact me. Otherwise, I will plan on following up with you next week to confirm your receipt of this submission.

Thank you, Dave Lloyd

Response to EPA's Questions

History: On June 25, 2013 TPI, Inc. met with EPA representatives Deborah Bredehoft and Demetra Salisbury in Lenexa, KS to discuss findings from a 2012 inspection conducted by a contracted EPA inspector. During that meeting, TPI presented additional information regarding hazardous waste determinations and processes conducted to demonstrate compliance with the Resource Conservation and Recovery Act. Additional questions and requests for information were presented by EPA during that meeting. This following and attached information responds to those questions and requests.

Topic 1: EPA had questions about why waste codes were different for what appears to be the same waste streams over a multiyear time period. The acetone solvent waste stream and the paint-related waste streams have different waste codes at different times when they are shipped for disposal. EPA also questioned if accurate hazardous waste determinations had been conducted on these waste streams given the inconsistency in the waste codes.

TPI Response: TPI has created the attached waste matrix (Appendix 1) which summarizes data from waste shipments since January 2012 to help answer the questions posed by EPA. The matrix identifies four hazardous waste streams generated at TPI and the hazardous waste codes associated with each waste stream that were used for manifesting and disposal for each shipment. It is important to note that all wastes at TPI have undergone hazardous waste determinations since the plant began operations and TPI has a process in place to review all new waste streams that may arise during operations.

While all wastes at TPI have been evaluated and profiled, there are inconsistencies which were identified once all of the manifests were summarized. Data from January 2012 to present indicates that there have been times when the acetone waste code (U002) has been included in the waste acetone profile. This is incorrect and should not have been listed on the profile. The waste codes applicable to the waste acetone are D001 and F003. No un-used acetone was shipped as waste so those codes were included in error.

Additionally, there were errors made on the paint-related materials waste stream. This waste stream has changed due to changes in solvent. The correct waste codes for this waste stream are D001, D035, F003 and F005. D005 was included in error. TPI assured that this was correct through analytical evaluation and shared this data with EPA in our previous meeting. At times, D035, F003 and F005 were left off of the manifest. This has been corrected. **It is important**

to note that these inaccuracies did not alter the way the waste was managed (through incineration with energy recovery at an EPA-permitted TSD facility) resulting in no additional risk to human health or then environment.

TPI believes that these errors are a result of too much reliance upon the hazardous waste disposal contractor. Prior to July 2012, TPI verified the waste codes that the hazardous waste disposal contractor proposed initially, but did not continue to follow-up with the hazardous waste disposal contractor. This lack of oversight, coupled with changes in the hazardous waste disposal contractor used, led to waste code errors. These errors were corrected immediately after the EPA inspection and TPI has implemented a much more rigorous evaluation process for hazardous waste determinations, including informing the hazardous waste disposal company that no changes to waste profiles are to be made by the contractor.

Topic 2: EPA had questions about the way that paint guns were cleaned and how satellite accumulation containers were identified.

TPI Response: TPI completed a thorough review of the paint solvent management process including an evaluation of the waste generation point and would like to offer the following additional information. As the wind turbine blades are manufactured, TPI employees use resins, paints and adhesives along with a large collection of equipment including, but not limited to, paint rollers, paint brushes, paint guns, gun nozzles, clamps and scrapers.

As the equipment is used, residual resin builds up on it requiring cleaning with solvent. At various locations throughout the plant, solvent is located in solvent holding containers. These solvent containers are manufacturing process units (MPUs) that are in use throughout operations to clean all types of equipment. Types of equipment cleaned include paint rollers, paint gun nozzles, clamps and any other "re-usable" equipment. Paint guns are also flushed with the solvent in the MPU. Although TPI is familiar with the EPA interpretation that states that spent solvent used to clean paint guns becomes waste the moment it leaves the paint gun, for TPI purposes, this is not the case.

The solvent used to clean the paint guns is collected in the MPUs and used to clean other equipment that require manual cleaning, such as the paint gun nozzles and paint mixing tools. Even after the solvent goes through the paint gun, it is a usable product. Once the solvent has been used extensively and the employee determines that it no longer has cleaning capacity, it is then deemed a waste and is placed in the satellite accumulation container. This is a conscientious effort for TPI to minimize the amount of solvent use and is part of our waste reduction production program as required by EPA.

According to RCRA online interpretation #12959 issued by EPA in 1987 (located in Appendix 2), the point at which the spent solvent leaves the MPU and enters the satellite accumulation container is the point of generation. Once the satellite accumulation container is filled to 55-gallons, it is then moved to the 90-day hazardous waste storage area. During the inspection in April 2012, the inspector identified the solvent MPU at the paint station as a satellite accumulation container and, then, made the interpretation that the container designated for satellite accumulation was actually a hazardous waste storage container located at Column 36. The inspector then noted that the words "hazardous waste" and no date was located on the container and associated violations with these findings.

The inspector was incorrect and the container located at Column 36 was a Satellite Accumulation Container. The solvent was located in an MPU. Upon becoming unusable as determined by the TPI employee, the spent solvent was placed in the satellite accumulation container located at "Column 36" in the inspector's report. Once the Satellite Accumulation Container at Column 36 is full, it is then transported to the 90-day hazardous waste storage area. There is no 90-day hazardous waste storage area located within the operating floor of the plant. The only 90-day hazardous waste storage area is located in a separate "Haz-Store" building located outside of the manufacturing plant.

Based on this additional information and photos provided in our original meeting EPA, TPI has demonstrated that the violations associated with the container located at Column 36 should be eliminated.

Topic 3: EPA requested that TPI identify the satellite accumulation area locations and the emergency response equipment on the facility map.

TPI Response: TPI has created a separate facility map to identify the location of Emergency Response Equipment and all Satellite Accumulation Areas. This map is located in Appendix G of the "One Plan" that is provided to EPA.

Topic 4: EPA indicated that the facility's Emergency Response and Training Plans were inadequate.

TPI Response: TPI has invested significant time and resources, estimated to be valued at $15,000 to update the facility Emergency Response Plan, improve the Training Plan and convert them, with additional resources and information, to a "One Plan" format. The current TPI One Plan is provided to EPA as a part of this response. TPI believes that the "One Plan" is a living document that is constantly being revised and updated. As such, TPI will continue to update the One Plan as conditions at the plant change. Additional significant resources, estimated to be approximately $5000, are anticipated to be invested to update the One Plan with any additional requests by EPA. TPI requests that the current investment and the additional planned investment, a total of $20,000 in resources, be included as part of the injunctive relief that EPA considers when calculating penalties.

From: becky wehrman [mailto:becky.wehrman@gmail.com]
Sent: Monday, July 08, 2013 9:47 PM
To: salisbury.demetra@epa.gov; bredehoft.deborah@epa.gov
Cc: Lloyd, David
Subject: TPI meeting review and extension request

Demetra and Deborah-
Thanks so much for taking the time to meet with us on 6/25 to discuss the NOPF for TPI. We appreciate the opportunity to offer additional information, ask questions and suggest alternatives to the proposed penalties.

I apologize for my delay in getting this to you, but I have summarized the information that we are to supply to you as we discussed.

TPI will provide the following additional information:
1. The summary matrix of TPI shipped waste streams by manifest
2. Explanation of the paint roller/equipment cleaning process and the waste disposal in the satellite accumulation containers including the current location of SAA #36 as referred to in the initial inspection report
3. A facility map showing all safety measures (eyewash stations, evacuation routes, fire extinguishers, etc) and satellite accumulation areas.
4. A final updated contingency/emergency response plan for the facility

We are in the process of pulling all of this information together, but are running into challenges with vacation schedules and timing. Although we originally thought it would be possible to have this to you by 7/12, could we have an extension until 8/2/13 to get the information to you?

Please let me know if I have forgotten any of the information that you requested and if this extension is approved. Thanks so much for your assistance.
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Becky Wehrman-Andersen
Hazardous Materials Consulting, Inc.
4645 E. Broadway Ave.,
Des Moines, IA 50317
515-210-1293
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Manifest	Line	Waste Codes	Weight	Manifest description	LDR description	Ship Date	LDR Type
4538825	9b1	F003, D001, U002	400	Waste acetone	Acetone	1/5/2012	R
	9b3	F003, D001, U002	1200	Waste acetone	Acetone	1/11/2012	R
	9b3	F003, D001, U002	1600	Waste acetone	shreddable solids fuel blend	1/19/2012	A
	9b3	F003, D001, U002	800	Waste acetone	Acetone	1/26/2012	R
	9b3	F003, D001	1400	Waste acetone	Acetone	1/29/2012	R
	9b3	F003, D001, U002	400	Waste acetone	Acetone	2/2/2012	R
	9b3	F003, D001, U002	400	Waste acetone	Acetone	2/16/2012	R
	9b3	F003, D001, U002	400	Waste acetone	Acetone	3/1/2012	R
	9b3	F003, D001, U002	800	Waste acetone	Acetone	3/20/2012	R
5099735	9b1	F003, D001, U002	400	Waste acetone	Acetone	3/29/2012	R
	9b3	F003, D001, U002	400	Waste acetone	Acetone	4/26/2012	R
	9b3	F003, D001, U002	1600	Waste acetone	Acetone	5/23/2012	R
3535813	9b2	F003, D001, U002	500	Waste acetone	Acetone	5/31/2012	R
	9b3	F003, D001, U002	450	Waste acetone	Acetone	6/7/2012	R
5153363	9b2	F003, D001, U002	1200	Waste acetone	Acetone	6/21/2012	R
	9b3	F003, D001, U002	800	Waste acetone	Acetone	6/29/2012	R
	9b3	F003, D001, U002	1300	Waste acetone	Acetone	7/12/2012	R
5099538	9b2	F003, D001	800	Waste acetone	Acetone	7/19/2012	R
5099542	9b2	F003, D001	400	Waste acetone	Acetone	7/26/2012	R
4538828	9b2	F003, D001	800	Waste acetone	na	8/2/2012	na
5697584	9b2	F003, D001	1300	Waste acetone	Acetone	8/9/2012	R
5697756	9b2	F003, D001	900	Waste acetone	Acetone	8/16/2012	R
5695872	9b2	F003, D001	900	Waste acetone	Acetone	8/23/2012	R
5695992	9b2	F003, D001	800	Waste acetone	Acetone	8/30/2012	R
5696170	9b2	F003, D001	900	Waste acetone	Acetone	9/6/2012	R
5696252	9b2	F003, D001	800	Waste acetone	Acetone	9/13/2012	R
5693871	9b2	F003, D001	1400	Waste acetone	Acetone	9/20/2012	R
5693973	9b2	F003, D001	900	Waste acetone	Acetone	9/27/2012	R
5694048	9b2	F003, D001	1300	Waste acetone	Acetone	10/4/2012	R
5694340	9b2	F003, D001	3000	Waste acetone	Acetone	10/18/2012	R
5694191	9b2	F003, D001	500	Waste acetone	Acetone	10/25/2012	R
6017297	9b2	F003, D001	1800	Waste acetone	Acetone	11/1/2012	R
6017297	9b2	F003, D001	1800	Waste acetone	na	11/1/2012	na
6017368	9b2	F003, D001	800	Waste acetone	Acetone	11/8/2012	R
6017528	9b2	F003, D001	1800	Waste acetone	Acetone	11/16/2012	R
	9b3	F003, D001	400	Waste acetone	Acetone	11/21/2012	R

	9b3	F003, D001	1300	Waste acetone	Acetone	12/7/2012	R
	9b3	F003, D001	850	Waste acetone	na	12/13/2012	na
	9b3	F003, D001	2000	Waste acetone	Acetone	12/28/2012	R
	9b3	F003, D001	450	Waste acetone	Acetone	1/1/2013	R
	9b3	F003, D001	1300	Waste acetone	Acetone	1/10/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	1/17/2013	R
	9b3	F003, D001	800	Waste acetone	Acetone	1/24/2013	R
	9b3	F003, D001	1600	Waste acetone	Acetone	2/1/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	2/7/2013	R
	9b3	F003, D001	450	Waste acetone	Acetone	2/15/2013	R
	9b3	F003, D001	1000	Waste acetone	Acetone	3/1/2013	R
	9b3	F003, D001	400	Waste acetone	Acetone	3/7/2013	R
	9b3	F003, D001	400	Waste acetone	Acetone	3/14/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	3/21/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	3/22/2013	R
	9b3	F003, D001	500	Waste acetone	Acetone	3/28/2013	R
	9b3	F003, D001	1200	Waste acetone	Acetone	4/4/2013	R
	9b3	F003, D001	800	Waste acetone	Acetone	4/11/2013	R
	9b3	F003, D001	800	Waste acetone	Acetone	4/18/2013	R
	9b3	F003, D001	800	Waste acetone	Acetone	4/25/2013	R
	9b3	F003, D001	800	Waste acetone	Acetone	5/3/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	5/5/2013	R
	9b3	F003, D001	900	Waste acetone	Acetone	5/16/2013	R
		TOTAL WASTE:	56200				
550752	9b1	D001	400	Waste flam liquids, nos	na	1/5/2012	na
5102444	9b2	D001	400	Waste flam liquids, nos	Pumpable fuel blend	6/29/2012	A
5153846	9b2	D001	500	Waste flam liquids, nos	Pumpable fuel blend	8/23/2012	A
5696169	9b2	D001	450	Waste flam liquids, nos	Pumpable fuel blend	10/4/2012	A
5694343	9b2	D001	500	Waste flam liquids, nos	Pumpable fuel blend	11/16/2012	A
6015083	9B1	D001	0	Waste flam liquids, nos	Pumpable fuel blend	12/13/2012	A
	9b4	D001	0	Waste flam liquids, nos	Pumpable fuel blend	12/28/2012	A
	9b4	D001	450	Waste flam liquids, nos	Pumpable fuel blend	1/1/2013	A
	9b4	D001	400	Waste flam liquids, nos	Pumpable fuel blend	2/1/2013	A
	9b4	D001	400	Waste flam liquids, nos	Pumpable fuel blend	3/14/2013	A
	9b4	D001	800	Waste flam liquids, nos	Pumpable fuel blend	4/18/2013	A
	9b4	D001	400	Waste flam liquids, nos	Pumpable fuel blend	5/16/2013	A
550736	9b2	F003, D001, D035, F005	400	Waste paint related material	na	1/5/2012	na

5099639	9b1	D001	1200	Waste paint related material	sludge fuel blend	1/11/2012	A
5099641	9b1	D001	800	Waste paint related material	sludge fuel blend	1/19/2012	A
5099835	9b1	D001	800	Waste paint related material	sludge fuel blend	1/26/2012	A
6015701	9b1	D001, D005, D035, F003, F005	500	Waste paint related material	LT-1 Thinner	1/29/2012	A
5102445	9b1	D001	800	Waste paint related material	sludge fuel blend	2/2/2012	A
5102564	9b1	D001	1200	Waste paint related material	sludge fuel blend	2/16/2012	A
5099642	9b1	D001	800	Waste paint related material	sludge fuel blend	3/1/2012	A
5102674	9b1	D001	400	Waste paint related material	sludge fuel blend	3/20/2012	A
5102805	9b1	D001	400	Waste paint related material	sludge fuel blend	4/26/2012	A
5099643	9b1	D001	500	Waste paint related material	sludge fuel blend	6/7/2012	A
	9b4	D001, D035, F003, F005	900	Waste paint related material	SSGC	6/21/2012	R
	9b4	F003, F005, D001, D035	450	Waste paint related material	SSGC	6/29/2012	R
	9b4	F005, F003, D001, D035	500	Waste paint related material	SSGC	7/12/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	7/19/2012	R
	9b4	D001, D005, D035, F003, F005	400	Waste paint related material	SSGC	7/26/2012	R
	9b4	D001, D005, D035, F003, F005	900	Waste paint related material	na	8/2/2012	na
	9b4	D001, D005, D035, F003, F005	400	Waste paint related material	SSGC	8/9/2012	R
	9b4	D001, D005, D035, F003, F005	1300	Waste paint related material	SSGC	8/16/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	8/23/2012	R
	9b4	D001, D005, D035, F003, F005	900	Waste paint related material	SSGC	8/30/2012	R
	9b4	D001, D005, D035, F003, F005	900	Waste paint related material	SSGC	9/6/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	9/13/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	9/20/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	9/27/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	10/4/2012	R
	9b4	D001, D005, D035, F003, F005	500	Waste paint related material	SSGC	10/11/2012	R
	9b4	D001, D005, D035, F003, F005	900	Waste paint related material	SSGC	10/18/2012	R
	9b4	D001, D005, D035, F003, F005	900	Waste paint related material	SSGC	10/25/2012	R
5162240	9b4	D001, D005, D035, F003, F005	1500	Waste paint related material	LT-1 Thinner	11/8/2012	A
	9b3	D001, D005, D035, F003, F005	1600	Waste paint related material	LT-1 Thinner	11/16/2012	A
6015702	9b1	D001, D005, D035, F003, F005	900	Waste paint related material	LT-1 Thinner	11/21/2012	A
6015853	9b1	D001, D005, D035, F003, F005	1500	Waste paint related material	LT-1 Thinner	12/7/2012	A
	9B2	D001, D005, D035, F003, F005	0	Waste paint related material	LT-1 Thinner	12/13/2012	A
6015700	9b1	D001, D005, D035, F003, F005	900	Waste paint related material	na	12/13/2012	na
5152387	9b1	D001, D005, D035, F003, F005	1600	Waste paint related material	LT-1 Thinner	12/28/2012	A
5152500	9b1	F003, F005, D001, D035, D005	500	Waste paint related material	LT-1 Thinner	1/1/2013	A
6015969	9b1	F003, F005, D001, D035, D005	1100	Waste paint related material	LT-1 Thinner	1/10/2013	A
5152773	9b1	F003, F005, D001, D035, D005	1500	Waste paint related material	LT-1 Thinner	1/17/2013	A

5152675	9b1	F003, F005, D001, D035, D005	1100	Waste paint related material	LT-1 Thinner	1/24/2013	A
5696559	9b1	F003, F005, D001, D035, D005	1500	Waste paint related material	LT-1 Thinner	2/1/2013	A
5696766	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	2/7/2013	A
5697866	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	2/15/2013	A
5698048	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	3/1/2013	A
5696556	9b1	F003, F005, D001, D035, D005	1500	Waste paint related material	LT-1 Thinner	3/7/2013	A
6014794	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	3/14/2013	A
5698175	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	3/21/2013	A
5698317	9b1	F003, F005, D001, D035, D005	1100	Waste paint related material	LT-1 Thinner	3/22/2013	A
6014670	9b1	F003, F005, D001, D035, D005	1100	Waste paint related material	LT-1 Thinner	3/28/2013	A
6015015	9b1	F003, F005, D001, D035, D005	400	Waste paint related material	LT-1 Thinner	4/4/2013	A
6014886	9b1	F003, F005, D001, D035, D005	800	Waste paint related material	LT-1 Thinner	4/11/2013	A
6716966	9b1	F003, F005, D001, D035, D005	800	Waste paint related material	LT-1 Thinner	4/18/2013	A
6716874	9b1	F003, F005, D001, D035, D005	500	Waste paint related material	LT-1 Thinner	4/25/2013	A
6717185	9b1	F003, F005, D001, D035, D005	1500	Waste paint related material	LT-1 Thinner	5/3/2013	A
6717326	9b1	F003, F005, D001, D035, D005	1000	Waste paint related material	LT-1 Thinner	5/5/2013	A
6717138	9b1	F003, F005, D001, D035, D005	1500	Waste paint related material	LT-1 Thinner	5/16/2013	A
	9b2	F003, D001	400	Waste solids containing flam liq	shreddable solids fuel blend	1/11/2012	A
	9b2	F003, D001	300	Waste solids containing flam liq	Acetone	1/19/2012	R
	9b2	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	1/26/2012	A
	9b2	F003, D001	600	Waste solids containing flam liq	shreddable solids fuel blend	1/29/2012	A
	9b2	F003, D001	1500	Waste solids containing flam liq	shreddable solids fuel blend	2/2/2012	A
	9b2	F003, D001	600	Waste solids containing flam liq	shreddable solids fuel blend	2/16/2012	A
	9b2	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	4/26/2012	A
5170801	9b2	F003, D001	650	Waste solids containing flam liq	shreddable solids fuel blend	5/23/2012	A
	9b2	F003, D001	350	Waste solids containing flam liq	shreddable solids fuel blend	6/7/2012	A
	9b3	F003, D001	700	Waste solids containing flam liq	shreddable solids fuel blend	6/21/2012	A
5153475	9b2	F003, D001	250	Waste solids containing flam liq	shreddable solids fuel blend	6/29/2012	A
5152252	9b2	F003, D001	400	Waste solids containing flam liq	shreddable solids fuel blend	7/12/2012	A
	9b3	F003, D001	300	Waste solids containing flam liq	shreddable solids fuel blend	7/19/2012	A
	9b3	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	7/26/2012	A
	9b3	F003, D001	400	Waste solids containing flam liq	na	8/2/2012	na
	9b3	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	8/9/2012	A
	9b3	F003, D001	1000	Waste solids containing flam liq	shreddable solids fuel blend	8/16/2012	A
	9b3	F003, D001	200	Waste solids containing flam liq	shreddable solids fuel blend	8/23/2012	A
	9b3	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	8/30/2012	A
	9b3	F003, D001	0	Waste solids containing flam liq	shreddable solids fuel blend	9/6/2012	A

	9b3	F003, D001	400	Waste solids containing flam liq	shreddable solids fuel blend	9/13/2012	A
	9b3	F003, D001	700	Waste solids containing flam liq	shreddable solids fuel blend	9/20/2012	A
	9b3	F003, D001	300	Waste solids containing flam liq	shreddable solids fuel blend	9/27/2012	A
	9b3	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	10/4/2012	A
5697454	9b2	F003, D001	300	Waste solids containing flam liq	shreddable solids fuel blend	10/11/2012	A
	9b3	F003, D001	600	Waste solids containing flam liq	shreddable solids fuel blend	10/18/2012	A
	9b3	F003, D001	200	Waste solids containing flam liq	shreddable solids fuel blend	10/25/2012	A
	9b3	F003, D001	500	Waste solids containing flam liq	SSGC	11/1/2012	A
	9b3	F003, D001	500	Waste solids containing flam liq	na	11/1/2012	na
	9b3	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	11/8/2012	A
	9b3	F003, D001	700	Waste solids containing flam liq	shreddable solids fuel blend	11/16/2012	A
	9b2	F003, D001	250	Waste solids containing flam liq	shreddable solids fuel blend	11/21/2012	A
	9b2	F003, D001	900	Waste solids containing flam liq	shreddable solids fuel blend	12/7/2012	A
	9b2	F003, D001	1300	Waste solids containing flam liq	na	12/13/2012	na
	9b2	F003, D001	0	Waste solids containing flam liq	shreddable solids fuel blend	12/28/2012	A
	9b2	F003, D001	2400	Waste solids containing flam liq	shreddable solids fuel blend	1/1/2013	A
	9b2	F003, D001	800	Waste solids containing flam liq	shreddable solids fuel blend	1/10/2013	A
	9b2	F003, D001	1500	Waste solids containing flam liq	shreddable solids fuel blend	1/17/2013	A
	9b2	F003, D001	450	Waste solids containing flam liq	shreddable solids fuel blend	1/24/2013	A
	9b2	F003, D001	1500	Waste solids containing flam liq	shreddable solids fuel blend	2/1/2013	A
	9b2	F003, D001	300	Waste solids containing flam liq	shreddable solids fuel blend	2/7/2013	A
	9b2	F003, D001	1200	Waste solids containing flam liq	shreddable solids fuel blend	2/15/2013	A
	9b2	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	3/1/2013	A
	9b2	F003, D001	900	Waste solids containing flam liq	shreddable solids fuel blend	3/7/2013	A
	9b2	F003, D001	200	Waste solids containing flam liq	shreddable solids fuel blend	3/14/2013	A
	9b2	F003, D001	1000	Waste solids containing flam liq	shreddable solids fuel blend	3/21/2013	A
	9b2	F003, D001	900	Waste solids containing flam liq	shreddable solids fuel blend	3/22/2013	A
	9b2	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	3/28/2013	A
	9b2	F003, D001	1200	Waste solids containing flam liq	shreddable solids fuel blend	4/4/2013	A
	9b2	F003, D001	200	Waste solids containing flam liq	shreddable solids fuel blend	4/11/2013	A
	9b2	F003, D001	400	Waste solids containing flam liq	shreddable solids fuel blend	4/18/2013	A
	9b2	F003, D001	300	Waste solids containing flam liq	shreddable solids fuel blend	4/25/2013	A
	9b2	F003, D001	500	Waste solids containing flam liq	shreddable solids fuel blend	5/3/2013	A
	9b2	F003, D001	800	Waste solids containing flam liq	shreddable solids fuel blend	5/5/2013	A
	9b2	F003, D001	1100	Waste solids containing flam liq	shreddable solids fuel blend	5/16/2013	A

9441.1987(53)

WASTES GENERATED IN MANUFACTURING PROCESS UNIT NOT SUBJECT TO LAND DISPOSAL RESTRICTIONS UNTIL IT EXITS THE UNIT IN WHICH IT WAS GENERATED

JUN 29 1987

Mr. Curtis J. Baker
Safety Environmental Specialist
Moore Business Forms &
Systems Division
3100 North Husband
Stillwater, Oklahoma 74075-2199

Dear Mr. Baker:

In your letter of May 27, 1987, you requested Agency guidance on whether the provisions in 40 CFR 261.4(c) pertain to wastes subject to Part 268 (i.e., the Land Disposal Restrictions).

According to the provisions in 40 CFR 261.4(c), hazardous wastes that are generated in a manufacturing process unit or an associated non-waste-treatment-manufacturing process unit, are not subject to regulation under Part 262 through 265, 270, 271, and 124 or the notification requirements of section 3010 of RCRA until it exits the unit in which it was generated. In the November 7, 1986, solvents and dioxins final rule, the Agency revised 40 CFR Part 261.4(c) to include a reference to Part 268. Therefore, wastes generated within a manufacturing process unit likewise are not subject to Part 268 until they exit the manufacturing process.

The Agency has stated in its June 11, 1987, Notice of Data Availability (52 FR 22356) that for purposes of determining compliance with land disposal restrictions, the initial generator of the waste (i.e., before the waste is treated) determines whether the waste is subject to the 2-year national capacity extension. Therefore, a hazardous waste which meets the requirements in 40 CFR 261.4(c) are subject to the 2-year national variance if it meets one or more of the following criteria (in □268.30):

1) The generator of the solvent waste is a small quantity generator of 100-1000 kilograms of hazardous waste per month; or

2) The solvent is from a response action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or any corrective action taken under the Resource Conservation and Recovery Act (RCRA)...; or

3) The solvent is a solvent-water mixture, solvent-containing sludge, or solvent-contaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001-F005 solvent constituents listed in Table CCWE of § 268.41.

I hope this information adequately addresses your concerns. If you have any additional questions, you may call me at (202) 382-4770.

Sincerely,

Stephen R. Weil, Chief
Land Disposal Restrictions Branch

cc: Region VI

Emergency Action Plan- One Plan

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I. OBJECTIVE

The objective of the TPI Composites' Emergency Action Plan or "One Plan" is to comply with the Occupational Safety and Health Administration's (OSHA) Emergency Action Plan Standard, 29 CFR 1910.38 and the Environmental Protection Agency (EPA) Standard, 40 CFR Subparts C and D (40CFR265.30-265.56) to prepare employees for dealing with emergency situations. This plan is designed to minimize injury and loss of human life and protect environmental and company resources by training employees, procuring and maintaining necessary equipment, and assigning responsibilities. This plan applies to all emergencies that may reasonably be expected to occur at 2300 North 33rd Avenue East, Newton, IA 50208.

II. ASSIGNMENT OF RESPONSIBILITY

A. EMERGENCY COORDINATOR

The Environmental Health and Safety Coordinator shall act as the Emergency Coordinator (EC) and will manage the Emergency Action Plan for TPI Composites. The EC is identified in Appendix C and in the main body of this document. The EC, with assistance from Human Resources, shall also maintain all training records pertaining to this plan. The EC is responsible for scheduling routine tests of the TPI Composites' emergency notification system with the appropriate authorities. EC will work with the Environmental Health and Safety (EHS) Engineer when additional resources or guidance are required.

As required in 40CFR265.55, the Emergency Coordinator has been trained and refreshed frequently (as operations change at TPI) on all aspects of the "One Plan" and operations/activities within the facility, location and characteristics of the waste handled, location of records within the facility and the facility layout to assure that they can effectively respond and lead operations in the event of an emergency. Additionally, TPI has granted the EC as well as the EHS Engineer the authority to commit resources necessary to carry out any activities required by the "One Plan."

The EC shall also coordinate with local public resources, such as fire department and emergency medical personnel, to ensure that they are prepared to respond as detailed in this plan. As required by 40CFR265.37, a detailed discussion of local resource relationships is located in Section III of this document.

B. EMERGENCY COORDINATORS:

EMERGENCY COORDINATOR CONTACTS:

Order of Contact	Name	Address (office)	Phone (office)	Address (home)	Phone (home)	Phone (cell)
Primary	Jim Bailey Emergency Coordinator #1	2300 North 33rd Ave. E, Newton, IA 50208	641-791-3524	[redacted]	[redacted]	[redacted] Ex. 6 PII
Secondary	Rich Myers Emergency Coordinator #2	2300 North 33rd Ave. E, Newton, IA 50208	641-791-3528	[redacted]	[redacted]	[redacted] Ex. 6 PII
Tertiary	David Lloyd EHS Engineer	373 Market St., Warren, RI	401-247-4096	[redacted]	[redacted]	[redacted] Ex. 6 PII

TPI Composites' also relies on of Floor Supervisors for emergency response assistance. Floor Supervisors are listed in Appendix E and each has a 2-way radio for on-going communication.

The Floor Supervisors are responsible for assisting with instituting the procedures in this plan in their designated areas in the event of an emergency. *(Note: Floor Supervisors and EC may be given the responsibility of accounting for employees/visitors after an evacuation has occurred.)*

C. MANAGEMENT

TPI Composites will provide adequate controls and equipment that, when used properly, will minimize or eliminate risk of injury to employees in the event of an emergency. TPI Composites' management will ensure proper adherence to this plan through regular review.

D. SUPERVISORS & TEAM LEADERS

Those Supervisors and Team Leaders who are not Emergency Coordinators shall themselves follow (and ensure that their subordinates are trained in) the procedures outlined in this plan.

E. ASSOCIATES

Associates are responsible for following the direction and instruction of their Supervisors. Associates may only report information regarding emergencies to their Supervisor and are prohibited from reporting information to sources outside of TPI Composites.

F. CONTRACTORS

Contract employees, temporary employees and contractors are responsible for complying with this plan, and shall be provided the training described herein by TPI Training Staff. TPI training staff are identified in Appendix F.

III. EMERGENCY PREPAREDNESS AND PREVENTION

A. OBJECTIVE:

This portion of the One Plan describes the measures which TPI has implemented to assure preparedness in the event of any emergency and to demonstrate prevention strategies that are in place. This section of the One Plan is designed to comply specifically with EPA's Preparedness and Prevention Requirements for Large Quantity Generators as described in 40CFR265.30-265.37.

B. EMERGENCY RESOURCES AVAILABLE AT TPI:

The the Emergency Evacuation Map for TPI can be found in Appendix A. A map of Emergency Response Equipment, including but not limited to such items as eye wash stations, fire extinguishers, spill response supplies and the hazardous waste satellite accumulation containers, can be found in Appendix G.

Located throughout the facility and readily accessible in work stations, lockers and emergency response equipment locations are personal protective equipment resources (PPE). These include, but are not limited to, chemical protective gloves, safety glasses, chemical resistant suits, disposable respirators and air purifying respirator replacement cartridges. All PPE locations are stocked constantly and checked at a minimum of daily by a contracted inventory management company. All employees receive education and training on how to use PPE at orientation and through constant on-the-job training reinforcement.

Emergency response equipment is summarized in Table 1, below. Table 1 includes the location, physical description and capabilities for all emergency response equipment as required by 40CFR265.51. PPE is not considered emergency response equipment but is rather part of daily operations. PPE has not been specifically included in the Table, however it is listed above as part of the One Plan.

As required in 40CFR265.31, TPI has a scheduled maintenance program for all permanently fixed emergency response equipment, such as the sprinkler system and alarm system, that consists of a minimum of annual review by a contracted service

vendor. All "consumable" emergency equipment such as spill booms, sumps and spill pads are reviewed at a minimum of daily to assure that they are in working order and available in the event of an emergency

Whenever production chemicals are being used or hazardous wastes are being managed, all personnel involved in the operations have immediate access to other personnel located within the plant, a two-way radio or cell phone on their person and "landline" telephone communication for external emergency response needs. Additionally, all operations involving chemical product usage or hazardous waste management, including storage of hazardous waste drums, are located with appropriate aisle space to assure that leaking, compromised or damaged containers can be identified and mitigated as required in 40CFR265.35.

Table 1: Emergency Equipment

TPI Documentation of Emergency Equipment on Site					
Equipment Name	**Location**	**Quantity (if applicable)**	**Brief Description**	**Inspection frequency**	**Usage description**
Internal Alarm Communication System	Located throughout the plant	NA	The alarm signal consists of combination horn/strobe light units that are equidistantly located along the building's walls and center column line. The alarm signal used for all plant emergencies consists of a flashing strobe light and three horn blasts (with a 2 second pause) that is simultaneously emitted from every horn/strobe unit.	Annual	Employees are trained to respond to the alarm by evacuating through the closest location as indicated by the site map.
Fire extinguisher	Throughout plant as located on map	1 portable extinguisher per location	10lb portable ABC extinguisher	Monthly	Employees are trained to use in the event of a small fire. Evacuation is mandated for all other fires.
Spill/leak containment sump.	Located at each satellite accumulation area	1 container per satellite accumulation drum.	Chemical resistant polyethylene spill containers. 60 gallon/900 pound capacity	Daily	Units serve to contain satellite accumulation drum leaks and overflows.
Absorbent spill pads and socks	Located at each satellite accumulation area	20 pads within spill kit drum; 12 socks within the spill kit drum	16"x16" universal absorbent pads for spill containment; 3'x36" universal absorbent socks for spill containment	Daily	Employees are trained to use spill pads to contain and absorb chemical product or hazardous waste spills

C. FIRE PREVENTION PLAN

TPI has a detailed Fire Prevention Plan located in Appendix I. Additionally, TPI has portable fire extinguishers and the facility has an automatic fire suppression "sprinkler" system throughout the plant.

D. INTERNAL COMMUNICATION DESCRIPTION:

TPI has an emergency alarm system at the plant as described in the Emergency Equipment Table above. Additionally, there is a "land line" telephone system and each Floor Supervisor has a two way radio for accessibility and emergency notification. EC and EHS Engineer have cell phones to assure an additional level of responsiveness.

E. HAZARDOUS WASTE MANAGEMENT, DISPOSAL AND CONTINGENCY PLANNING

TPI has a hazardous waste management and disposal plan which documents detailed hazardous waste management practices. This is located in Appendix J.

TPI has a hazardous waste contingency plan which documents additional information that supplements the spill preparedness section of this "One Plan." This is located in Appendix K.

IV. PLAN IMPLEMENTATION

A. RESPONDING TO SERIOUS BODILY INJURY

In the event an employee has suffered a serious bodily injury and requires medical assistance, it should be reported to a supervisor or team leader who should call 8-9-1-1 immediately, then notify the EC. TPI's personnel trained in First Aid response should be contacted to respond to the injury event.

First Responders and EC

Jim Bailey, First Responder/EC [redacted] Ex. 6 PII

B. ADVANCED MEDICAL CARE

Under no circumstances shall an employee provide advanced medical care and treatment. These situations shall be left to emergency services professionals, or designated person(s), who have the necessary training, equipment, and experience. Untrained individuals may endanger themselves and/or those they are trying to assist.

To assist in evaluation of the level of medical care required, TPI subscribes to Medcor which is a telephonic nurse/triage service for workplace injuries. Additional information about this service can be accessed at:

www.medcor.com/InjuryTriage/InjuryTriage.asp.

Medical Triage Assistance Service

Medcor Phone Number: 8-1-800-775-5866.

C. REPORTING FIRE AND EMERGENCY SITUATIONS

All fires and emergency situations will be reported as soon as possible to a supervisor, team leader, and the EC by one of the following means:

1. verbally as soon as possible during normal work hours; or
2. by telephone if after normal work hours or on weekends.

Emergency Coordinator (EC)

Jim Bailey- EC
Primary phone number
Alternate phone number [redacted] Ex. 6 PII

To eliminate confusion and the possibility of false alarms, only managers, supervisors, and team leaders are authorized to contact the appropriate community emergency response personnel. The telephone numbers and contact information for the emergency response personnel for TPI Composites at 2300 North 33rd Avenue East are:

Emergency Contacts

Any Serious Medical or Fire Emergency 8-9-1-1

Non-Emergency Contacts

Newton Fire/EMS/HAZMAT	8-1-641-792-3347
SKIFF Medical Center	8-1-641-792-1273
Newton Police Department	8-1-641-791-0850
Jasper County Sheriff	8-1-641-792-5912

D. SPILL RESPONSE

Any spills of materials or chemicals at TPI composites must undergo an evaluation to determine level of risk presented. Upon the identification of a spill, employees shall notify the Floor Supervisor. The Floor Supervisor will work with the employee to determine if the spill is hazardous to employees and/or the environment. If determined to be hazardous, the Floor Supervisor will then contact the EC for additional assistance.

Steps to be taken by the Supervisor in the event of a Chemical Spill (including hazardous waste)

1. **Recognition** - Answer these questions using information sources that include but are not limited to generator knowledge, labels, placards, safety data sheets and discussion with operations personnel:
What type of material has been spilled?
What risks are associated with the material spilled?
What PPE or spill response measures are required to safely manage the spill?
How much material has been spilled?
Where has the material been spilled?
Does TPI have the resources, training and equipment to clean up the spill?

2. **Basic assessment** - Immediately upon being notified, the Floor Supervisor shall assess the situation and determine if the spill can be handled internally with available resources.

The following questions must be considered in the basic assessment:
Can the source of the spill be shut off?
Is the spilled material a hazardous chemical?
Is the spilled material flammable?
Can the spill be safely controlled with available in-house resources?
Is building evacuation necessary?

3. **Action:** - Depending on the results of the basic assessment:

If the spilled material is less than 55 gallons and can be safely controlled using TPI COMPOSITES equipment* *it meets the definition of an "incidental spill" per 29 CFR 1910.120 it can be managed in-house and by using trained TPI personnel:*
Contact the EC
Initiate a cleanup using available personnel and spill cleanup materials.
Assure that any nearby storm drains are protected.
Segregate all contaminated materials for proper disposal.
Resume work if and only when it is safe to do so.

If the spill is greater than 55 gallons or cannot be contained using TPI COMPOSITES equipment* *it meets the definition of an "emergency response" per 29 CFR 1910.120, requires additional assistance and personnel:*

Initiate evacuation if emergency poses a potential danger to building occupants by activating the emergency alarm system.
Dial 8-911 for Emergency Assistance. Provide details of assessment.

Notify EC.
Provide Emergency Responders with details pertaining to the emergency.
If an evacuation was required, verify that all persons are out of the building and accounted for.
Do not allow anyone to re-enter the building or the affected area until receiving permission from the Emergency Responders.
Do not discuss any aspect of the incident with the press.

If there is a possibility that the spill may be, or may have been, released to the environment (i.e., ground or storm drain):
Utilize absorbent equipment** to prevent or minimize environmental contamination.
Contact the EC immediately
Contact the EHS Engineer immediately.
If spill is above the identified RQ or Reportable Quantity or has been released to the environment, the EC and/or the EHS Engineer will immediately report the spill to the IDNR, Jasper County Emergency Management Office and the National Response Center.

**Emergency chemical spill kits are available at each satellite accumulation area and are identified on the Emergency Equipment Map located in Appendix G.*

SKIFF Medical Center	8-1-641-792-1273
Newton Fire/EMS/HAZMAT	8-1-641-792-3347 or 8-911
Newton Police Department	8-1-641-791-0850 or 8-911
Jasper County Sheriff	8-1-641-792-5912 or 8-911
IDNR Spill Report Line	8-1-515-281-8694
Jasper County Emergency Management	8-1-641-792-7555
National Response Center	8-1-800-424-8802

E. Fire Response

Under no circumstances shall an employee attempt to fight a fire that has passed the incipient stage (that which can be put out with a fire extinguisher), nor shall any employee attempt to enter a burning building area to conduct search and rescue. These actions shall be left to emergency services professionals who have the necessary training, equipment, and experience (such as the fire department or emergency medical professionals). Untrained individuals may endanger themselves and/or those they are trying to rescue.

F. Informing Employees of Building/Area Evacuation

In the event of a fire or emergency situation, the emergency alarms will be activated and the EC working with Floor Supervisors shall ensure that all occupants in the building or area of emergency are notified as soon as possible using radio (channel 6) and visual inspection. EC shall provide special instructions to all employees via radio (channel 6)

and verbal communication. Floor Supervisors and Team Leaders will ensure that all employees have evacuated their area of responsibility, including restrooms, storerooms, conference rooms, etc.

G. EVACUATION ROUTES

Emergency evacuation escape route plans (see Appendix A) are posted at each of the exits throughout the building. In the event that a fire/emergency alarm is sounded or instructions for evacuation are given by the General Manager or EC, all employees shall immediately exit the building at the nearest exits as shown in the escape route plans, and shall meet as soon as possible at the designated assembly area(s). Employees with offices shall close the doors (unlocked) as they exit the area.

Mobility impaired employees and their assigned assistants will gather at the designated area within the building to ensure safe evacuation to the designated evacuation assembly area.

The designated evacuation assembly areas are located at the east and west ends of the building. These are shown on the Evacuation Route map in Appendix A.

H. ACCOUNTING FOR EMPLOYEES/VISITORS AFTER EVACUATION

Once an evacuation has occurred, Floor Supervisors, working with the EC, shall account for each employee/visitor assigned to them at the designated evacuation assembly area. Each Associate is responsible for reporting to their Supervisor or Team Leader so an accurate head count can be made. All employee counts shall then be reported to the EC as soon as possible.

I. CORPORATE NOTIFICATION

The General Manager shall contact TPI Corporate offices as soon as possible if media coverage of the situation is expected.

The EC shall contact the General Manager as soon as possible with information on employee injuries and/or loss of life, property damages, theft, or cargo losses.

J. RE-ENTRY

Once the building has been evacuated, no one shall re-enter the building for any reason, except for designated and properly trained rescue personnel (such as fire department or emergency medical professionals). Untrained individuals may endanger themselves and/or those they are trying to rescue.

All employees shall remain at the designated evacuation assembly area(s) until the fire department or other emergency response agency notifies General Manager and/or the EC that either:

- the building is safe for re-entry, in which case associates shall return to their workstations; or
- the building/assembly area is not safe, in which case associates shall be instructed by the General Manager on how and when to vacate the premises.

K. SEVERE WEATHER

The EC shall monitor severe weather advisories, watches, and warnings. This person will also announce imminent severe weather threats (such as tornados, hail, or high winds) by public address system or other means of immediate notification available. All employees shall immediately retreat to the designated shelter area until the threat of severe weather has passed as communicated by the EC.

L. EMERGENCY CONTACT INFORMATION

Human Resources personnel shall maintain a list of all employees' personal emergency contact information and shall keep the list in designated area for easy access to the EC in the event of an emergency.

If a fire or emergency situation occurs after normal business hours, EC or designated persons shall contact all associates not on shift of future work status, depending on the nature of the situation.

V. TRAINING

A. EMPLOYEE TRAINING

All employees shall receive instruction on this Emergency Action Plan as part of New Employee Orientation upon hire. Additional training shall be provided by the EC, the EHS Engineer or the designated HR Delegate.

- when there are any changes to the plan and/or facility;
- when an employee's responsibilities change; and
- periodic refresher training.

Items to be reviewed during the training may include, but are not limited to:

- proper housekeeping;
- fire prevention practices;
- fire extinguisher locations, usage, and limitations;
- threats, hazards, and protective actions;
- means of reporting fires and other emergencies;
- names of Emergency Coordinators;
- individual responsibilities;
- alarm systems;
- escape routes and procedures;

- emergency shut-down procedures, if applicable;
- procedures for accounting for employees and visitors;
- closing doors;
- severe weather procedures; and
- Emergency Action Plan availability.

B. EMPLOYEE TRAINING PROGRAM DESCRIPTION:

A detailed employee training program which identifies levels of training at TPI, job descriptions for those individuals trained at each level , education, requisite skills as well as their responsibilities relative to hazardous waste management, as required by 40CFR265.16 is located in Appendix H. All employees are trained within six months of their effective date of hire and do not work unsupervised until they have completed training. Training records for employees are kept for a minimum of three years after the employee is no longer employed by TPI.

Copies of training program components are updated frequently and are available upon request.

C. FIRE/EVACUATION DRILLS

Fire/Evacuation drills shall be conducted at least annually, and may be conducted in coordination with local police and fire departments. Additional drills shall be conducted if physical properties of the business change, processes change, or as otherwise deemed necessary.

D. CONTRACTOR TRAINING

EC or designee will provide training to all contractors on the same items as employees are trained on in Part V.A of this plan.

E. TRAINING RECORDS

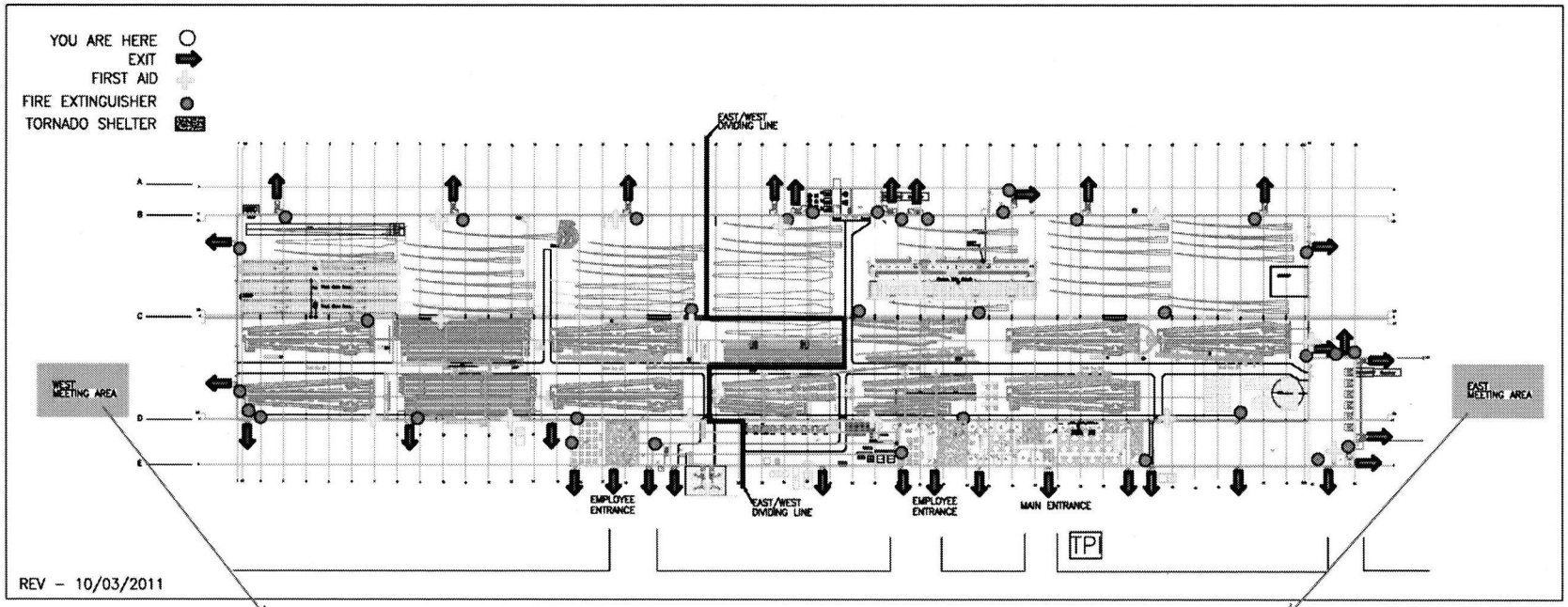
EHS Coordinator and/or HR Coordinator shall document all training pertaining to this plan and shall maintain records in the Safety Office and/or Employee file.

VI. PLAN RE-EVALUATION

This Emergency Action Plan shall be reviewed periodically, or as needed if changes to the worksite are made, by the EC. Following each fire drill, responsible management and employee representatives shall evaluate the drill for effectiveness and weaknesses in the plan, and shall implement changes to improve it as needed.

Appendix A Evacuation Routes

Emergency Evacuation



West End Assembly Area

Maintenance Personnel
Spar Cap
Wet Layup
RCO
Kitting area
Molds 2-3-5 & 6

2KM & Crane Personnel are to report to the area team leader at which they are working at the time of the evacuation and the plan coordinator for that area.

East End Assembly Area

Quality	
Warehouse	Eastman
Sanding/Paint Prep	Molds 1-4 & 7
Paint Booth	Office Personnel
Trim Booth	Lab Tech's
Final Finish	Small Parts
NCR	Shear Web
Transition/Crane Operators	TE Prefab Molds

Appendix B
Emergency Action Plan Checklist
Courtesy of the Occupational Safety and Health Administration (OSHA)

General Issues		
☐	Does the plan consider all natural or man-made emergencies that could disrupt your workplace?	Common sources of emergencies identified in emergency action plans include - fires, explosions, floods, tornadoes, toxic material releases, radiological and biological accidents, civil disturbances, and workplace violence.
☐	Does the plan consider all potential internal sources of emergencies that could disrupt your workplace?	Conduct a hazard assessment of the workplace to identify any physical or chemical hazards that may exist and could cause an emergency.
☐	Does the plan consider the impact of these internal and external emergencies on the workplace's operations and is the response tailored to the workplace?	Brainstorm worst-case scenarios asking yourself what you would do and what would be the likely impact on your operation and device appropriate responses.
☐	Does the plan contain a list of key personnel with contact information as well as contact information for local emergency responders, agencies and contractors?	Keep your list of key contacts current and make provisions for an emergency communications system such as a cellular phone, a portable radio unit, or other means so that contact with local law enforcement, the fire department, and others can be swift.
☐	Does the plan contain the names, titles, departments, and telephone numbers of individuals to contact for additional information or an explanation of duties and responsibilities under the plan?	List names and contact information for individuals responsible for implementation of the plan.
☐	Does the plan address how rescue operations will be performed?	Unless you are a large employer handling hazardous materials and processes or have employees regularly working in hazardous situations, you will probably choose to rely on local public resources, such as the fire department, which are trained, equipped, and certified to conduct rescues. Make sure any external department or agency identified in your plan is prepared to respond as outlined in your plan. Untrained individuals may endanger themselves and those they are trying to rescue.

☐	Does the plan address how medical assistance will be provided?	Most small employers do not have a formal internal medical program and make arrangements with medical clinics or facilities close by to handle emergency. If an infirmary, clinic, or hospital is not close to your workplace, ensure that onsite person(s) have adequate training in first aid. The American Red Cross, some insurance providers, local safety councils, fire departments, or other resources may be able to provide this training. Treatment of a serious injury should begin within 3 to 4 minutes of the accident. Consult with a physician to order appropriate first-aid supplies for emergencies. Establish a relationship with a local ambulance service so transportation is readily available for emergencies.
☐	Does the plan identify how or where personal information on employees can be obtained in an emergency?	In the event of an emergency, it could be important to have ready access to important personal information about your employees. This includes their home telephone numbers, the names and telephone numbers of their next of kin, and medical information.
Evacuation Policy and Procedure		
☐	Does the plan identify the conditions under which an evacuation would be necessary?	The plan should identify the different types of situations that will require an evacuation of the workplace. This might include a fire, earthquake, or chemical spill. The extent of evacuation may be different for different types of hazards.
☐	Does the plan identify a clear chain of command and designate a person authorized to order an evacuation or shutdown of operations?	It is common practice to select a responsible individual to lead and coordinate your emergency plan and evacuation. It is critical that employees know who the coordinator is and understand that this person has the authority to make decisions during emergencies. The coordinator should be responsible for assessing the situation to determine whether an emergency exits requiring activation of the emergency procedures, overseeing emergency procedures, notifying and coordinating with outside emergency services, and directing shutdown of utilities or plant operations if necessary.
☐	Does the plan address the types of actions expected of different employees for the various types of potential emergencies?	The plan may specify different actions for employees depending on the emergency. For example, employers may want to have employees assemble in one area of the workplace if it is threatened by a tornado or earthquake but evacuate to an exterior location during a fire.
☐	Does the plan designate who, if anyone will stay to shut down critical operations during an evacuation?	You may want to include in your plan locations where utilities (such as electrical and gas utilities) can be shut down for all or part of the facility. All individuals remaining behind to shut down critical systems or utilities must be capable of recognizing when to abandon the operation or task and evacuate themselves.

☐	Does the plan outline specific evacuation routes and exits and are these posted in the workplace where they are easily accessible to all employees?	Most employers create maps from floor diagrams with arrows that designate the exit route assignments. These maps should include locations of exits, assembly points and equipment (such as fire extinguishers, first aid kits, spill kits) that may be needed in an emergency. Exit routes should be clearly marked and well lit, wide enough to accommodate the number of evacuating personnel, unobstructed and clear of debris at all times, and unlikely to expose evacuating personnel to additional hazards.
☐	Does the plan address procedures for assisting people during evacuations, particularly those with disabilities or who do not speak English?	Many employers designate individuals as evacuation wardens to help move employees from danger to safe areas during an emergency. Generally, one warden for every 20 employees should be adequate, and the appropriate number of wardens should be available at all times during working hours. Wardens may be responsible for checking offices and bathrooms before being the last person to exit an area as well as ensuring that fire doors are closed when exiting. Employees designated to assist in emergency evacuation procedures should be trained in the complete workplace layout and various alternative escape routes. Employees designated to assist in emergencies should be made aware of employees with special needs (who may require extra assistance during an evacuation), how to use the buddy system, and any hazardous areas to avoid during an emergency evacuation.
☐	Does the plan identify one or more assembly areas (as necessary for different types of emergencies) where employees will gather and a method for accounting for all employees?	Accounting for all employees following an evacuation is critical. Confusion in the assembly areas can lead to delays in rescuing anyone trapped in the building, or unnecessary and dangerous search-and-rescue operations. To ensure the fastest, most accurate accounting of your employees, consider taking a head count after the evacuation. The names and last known locations of anyone not accounted for should be passed on to the official in charge.
☐	Does the plan address how visitors will be assisted in evacuation and accounted for?	Some employers have all visitors and contractors sign in when entering the workplace. The hosts and/or area wardens, if established, are often tasked with assisting these individuals evacuate safely.
Reporting Emergencies and Alerting Employees in an Emergency		
☐	Does the plan identify a preferred method for reporting fires and other emergencies?	Dialing 911 is a common method for reporting emergencies if external responders are utilized. Internal numbers may be used. Internal numbers are sometimes connected to intercom systems so that coded announcements may be made. In some cases employees are requested to activate manual pull stations or other alarm systems.

☐	Does the plan describe the method to be used to alert employees, including disabled workers, to evacuate or take other action?	Make sure alarms are distinctive and recognized by all employees as a signal to evacuate the work area or perform other actions identified in your plan. Sequences of horn blows or different types of alarms (bells, horns, etc.) can be used to signal different responses or actions from employees. Consider making available an emergency communications system, such as a public address system, for broadcasting emergency information to employees. Ideally alarms will be able to be heard, seen, or otherwise perceived by everyone in the workplace including those that may be blind or deaf. Otherwise floor wardens or others must be tasked with ensuring all employees are notified. You might want to consider providing an auxiliary power supply in the event of an electrical failure.
Employee Training and Drills		
☐	Does the plan identify how and when employees will be trained so that they understand the types of emergencies that may occur, their responsibilities, and actions as outlined in the plan?	Training should be offered to employees when you develop your initial plan and when new employees are hired. Employees should be retrained when your plan changes due to a change in the layout or design of the facility, when new equipment, hazardous materials, or processes are introduced that affect evacuation routes, or when new types of hazards are introduced that require special actions. General training for your employees should address the following: • individual roles and responsibilities; • threats, hazards, and protective actions; • notification, warning, and communications procedures; • emergency response procedures; • evacuation, shelter, and accountability procedures; • location and use of common emergency equipment; and • emergency shutdown procedures. You may also need to provide additional training to your employees (i.e. first aid procedures, portable fire extinguisher use, etc.) depending on the responsibilities allocated employees in your plan.
☐	Does the plan address how and when retraining will be conducted?	If training is not reinforced it will be forgotten. Consider retraining employees annually.
☐	Does the plan address if and how often drills will be conducted?	Once you have reviewed your emergency action plan with your employees and everyone has had the proper training, it is a good idea to hold practice drills as often as necessary to keep employees prepared. Include outside resources such as fire and police departments when possible. After each drill, gather management and employees to evaluate the effectiveness of the drill. Identify the strengths and weaknesses of your plan and work to improve it.

Appendix C

EMERGENCY PLAN COORDINATORS

Order of Contact	Name	Address (office)	Phone (office)	Address (home)	Phone (home)	Phone (cell)	
Primary	Jim Bailey Emergency Coordinator #1	2300 North 33rd Ave. E, Newton, IA 50208	641-791-3524	[redacted]	[redacted]	[redacted]	Ex. 6 PII
Secondary	Rich Myers Emergency Coordinator #2	2300 North 33rd Ave. E, Newton, IA 50208	641-791-3528	[redacted]	[redacted]	[redacted]	Ex. 6 PII
Tertiary	David Lloyd EHS Engineer	373 Market St., Warren, RI	401-247-4096	[redacted]	[redacted]	[redacted]	Ex. 6 PII

For emergency action plan coordinator information and phone numbers, please refer to the following posting areas.

1. War room next to the office door.
2. Bulletin board by the east time clocks.
3. Bulletin board by the west time clocks.
4. The environmental health & safety office.
5. The warehouse receiving office.

Appendix D

MOBILITY IMPAIRED EMPLOYEES AND ASSIGNED ASSISTANTS

None at this time

Appendix E: List of Floor Supervisors

The following is a list of the Floor Supervisors at TPI. These individuals carry two-way radios, have been trained at Level II RCRA training according to the TPI Training program and are expected to assist the Emergency Coordinator with limited hazardous waste actions as described in their job descriptions listed in the Employee Training Program located in Appendix H.

Luke Coady
Scott Deeter
Marty Parks
Danny Mai
Barb Sinnot
Alan Davis
Scott Illingworth
Heather Snyder
John Ward
Dave Lynch
Alex Richardson
Anthony Scandiffio
Dave Corwin
Rich Myers
Dan Messerli

Appendix F: List of TPI Trainers

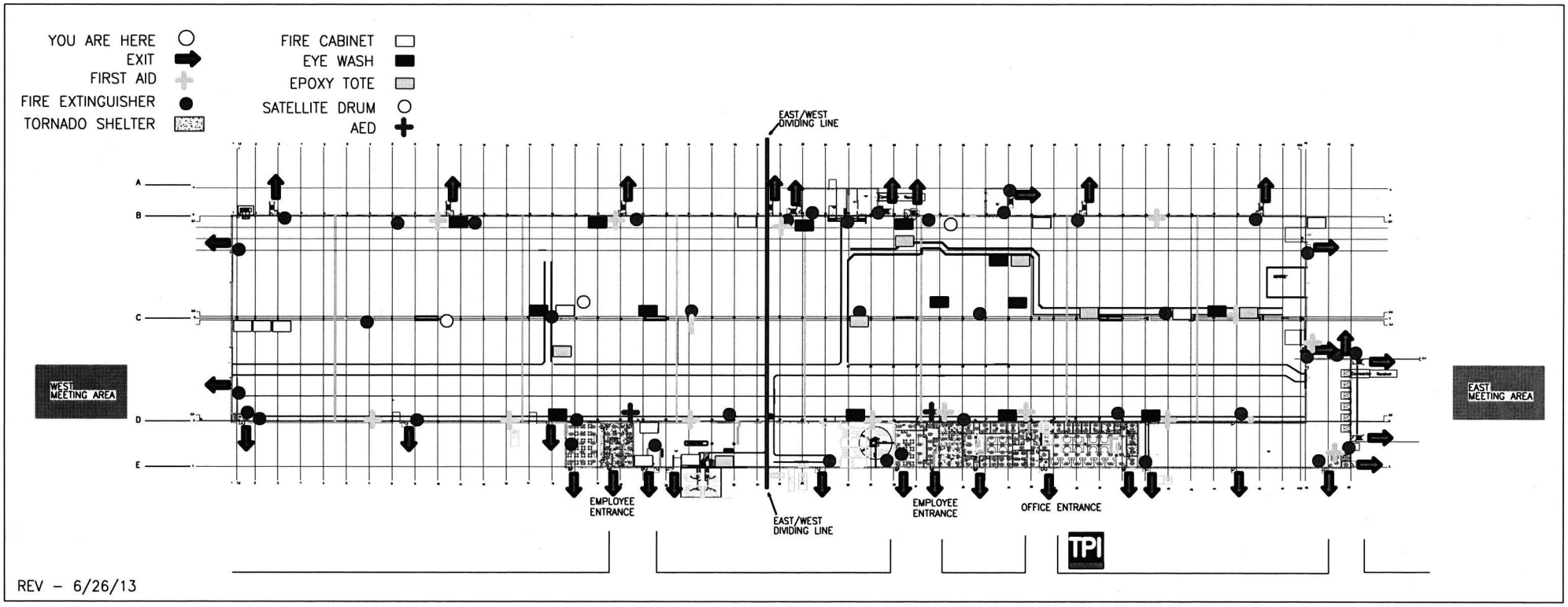
The following is a list of the Trainers at TPI. These individuals carry are responsible for training employees to comply with all OSHA, EPA and DOT programs as described in their job descriptions listed in the Employee Training Program. Training program is summarized in Appendix H.

Name	Title	Level of Training	Credentials
Jim Bailey	EHS Coordinator/EC	Conducts Level I training as defined in Employee Training Program	Available upon request
Craig Althof	Human Resources/EHS Assistant	Conducts Level I training as defined in Employee Training Program	Available upon request
David Lloyd	EHS Engineer	Conducts Level II training as defined in Employee Training Program	Available upon request
Outside Resources	NA	Conducts Level III training	A variety of vendors are used for this service.

Revision History

Prepared By	Rev	Date	Reason for Change
Craig Althof	A	1/7/2012	Initial Issue
David Lloyd	B	8/6/2013	EPA Input

Appendix G - Emergency Response Map



Appendix H - TPI Training Program

HAZARDOUS WASTE JOB CATEGORIES AND TRAINING REQUIREMENTS FOR TPI IOWA			
	Level I RCRA Training Job Categories	**Level II RCRA Training Job Categories**	**Level III RCRA Training Job Categories**
	EHS Coordinator (1)	Shipping/Receiving Employee (3)	Production Technicians (6)
	Shipping/Receiving Supervisor(2)	Floor Supervisors (4)	General Plant & Office (7)
Training Element		Paint Department Employees (5)	
Hazardous waste regulations	✓		
Making waste determinations	✓		
Properties of facility wastes	✓	✓	✓
Waste Minimization	✓	✓	✓
Reporting and record keeping	✓	✓	
Accumulation (satellite / 90 day)	✓	✓	✓
Container and tank management	✓	✓	✓
Inspections	✓	✓	✓
Waste packaging procedures	✓	✓	
Pre-transportation (manifests, labels)	✓	✓	
Contingency plan implementation	✓	✓	✓
Emergency response procedures	✓	✓	✓
Emergency equipment use, inspection, repair	✓	✓	
Communications and alarms	✓	✓	✓
Evacuation routes	✓	✓	✓
Response to fire, explosion, and environmental contamination incidents	✓	✓	✓

Training elements are included in initial training and are refreshed annually as required by 40CFR265.16

Job Category Descriptions as required by 40CFR265.16(d)(2)

(1) Responsible for the overall hazardous waste management functions at the facility.

(2) Responsible for some hazardous waste management functions. Performs physical waste activities (e.g., moving and labelling containers, conducting hazardous waste inspections, coordinating hazardous waste shipments, loading hazardous waste for shipments, and signing manifests).

(3) Responsible for some hazardous waste management functions. Performs physical waste activities (e.g., moving and labelling containers, conducting hazardous waste inspections, loading hazardous wastes for shipment).

(4) Responsible for direct supervision of production activities at the facility. Supervises staff that are hazardous waste generators.

(5) Routinely generates hazardous waste and transfers wastes to satellite accumulation containers.

(6) Periodically generates hazardous waste and transfers wastes to satellite accumulation containers.

(7) Generates no hazardous waste and has no direct contact with physical hazardous waste activities as part of the production process.

Job Category Requisite Education, Skills and/or Qualifications as required by 40CFR265.16(d)(2)

(1) Same as (2)

(2) Same as (7) plus at least 2 years of hazardous waste management experience.

(3) Same as (7)

(4) Same as (7) plus at least 2 years of manufacturing production experience.

(5) Same as (7)

(6) Same as (7)

(7) High school diploma or GED. Ability to read, write, and communicate in English and follow detailed work instructions.

	EHS Program/Policy	Doc: EHS-009
		Rev: B
	Fire Prevention Plan	Date: 8/6/2013
		Page: 1 of 8

Fire Prevention Plan
Table of Contents

I. OBJECTIVE

The purpose of this Fire Prevention Plan is to eliminate the causes of fire, prevent loss of life and property by fire, and to comply with the Occupational Safety and Health Administration's (OSHA) standard on fire prevention, 29 CFR 1910.39. It provides associates with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards.

TPI Iowa is committed to minimizing the threat of fire to associates, visitors, and property. TPI Iowa complies with all applicable laws, regulations, codes, and good practices pertaining to fire prevention. TPI's separate Emergency Action Plan spells out the procedures for responding to fires. This Fire Prevention Plan serves to reduce the risk of fires at TPI in the following ways:

A. identifies materials that are potential fire hazards and their proper handling and storage procedures;
B. distinguishes potential ignition sources and the proper control procedures of those sources;
C. describes fire protection equipment and/or systems used to control fire hazards;
D. identifies persons responsible for maintaining the equipment and systems installed to prevent or control ignition of fires;
E. identifies persons responsible for the control and accumulation of flammable or combustible material;
F. describes good housekeeping procedures necessary to insure the control of accumulated flammable and combustible waste material and residues to avoid a fire emergency; and
G. provides training to associates with regard to fire hazards to which they may be exposed.

II. ASSIGNMENT OF RESPONSIBILITY

Fire safety is everyone's responsibility. All associates should know how to prevent and respond to fires, and are responsible for adhering to company policy regarding fire emergencies.

A. MANAGEMENT

TPI Iowa's management determines fire prevention and protection policies. Management will provide adequate controls to provide a safe workplace, and will provide adequate resources and training to its associates to encourage fire prevention and the safest possible response in the event of a fire emergency.

B. PLAN ADMINISTRATOR

The EHS Coordinator shall manage the Fire Prevention Plan for TPI Iowa, and shall maintain all records pertaining to the plan. The Plan Administrator shall also:

1. Develop and administer TPI's fire prevention training program
2. Ensure that fire control equipment and systems are properly maintained
3. Control fuel source hazards
4. Conduct fire risk surveys and make recommendations

C. SUPERVISORS / TEAM LEADERS

Supervisors are responsible for ensuring that associates receive appropriate fire safety training, and for notifying the EHS Coordinator when changes in operation increase the risk of fire. Supervisors are also responsible for enforcing TPI's fire prevention and protection policies.

D. ASSOCIATES

All associates shall:

1. Complete all required training before working without supervision
2. Conduct operations safely to limit the risk of fire
3. Report potential fire hazards to their supervisors
4. Follow fire emergency procedures

III. PLAN IMPLEMENTATION

A. GOOD HOUSEKEEPING

To limit the risk of fires, associates shall take the following precautions:

1. Minimize the storage of combustible materials;
2. Make sure that doors, hallways, stairs, and other exit routes are kept free of obstructions;
3. Dispose of combustible waste in covered, airtight, metal containers;
4. Use and store flammable materials in well-ventilated areas away from ignition sources;
5. Use only nonflammable cleaning products;
6. Keep incompatible (i.e., chemically reactive) substances away from each other;
7. Perform "hot work" in controlled and well-ventilated areas;
8. Keep equipment in good working order (i.e., inspect electrical wiring and appliances regularly and keep motors and machine tools free of dust and grease;
9. Ensure that heating units are safeguarded;
10. Report all gas leaks immediately. The Maintenance Manager shall ensure that all gas leaks are repaired immediately upon notification;
11. Repair and clean up flammable liquid leaks immediately;
12. Keep work areas free of dust, lint, sawdust, scraps, and similar material;

13. Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment; and
14. Ensure that required hot work permits are obtained when cutting or welding is performed outside the Maintenance Department.

A. MAINTENANCE

The Maintenance Department will ensure that equipment is maintained according to manufacturers' specifications. TPI Iowa will also comply with requirements of the National Fire Protection Association (NFPA) codes for specific equipment. Only properly trained and authorized individuals shall perform maintenance work.

The following equipment is subject to the maintenance, inspection, and testing procedures:

1. equipment installed to detect fuel leaks, control heating, and control pressurized systems;
2. portable fire extinguishers and automatic sprinkler systems;
3. detection systems for smoke and heat;
4. fire alarm systems; and
5. emergency backup systems and the equipment they support.

III. TYPES OF HAZARDS

The following sections address the major workplace fire hazards at TPI's facilities and the procedures for controlling the hazards.

A. ELECTRICAL FIRE HAZARDS

Electrical system failures and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

To prevent electrical fires, associates shall:

1. Make sure that worn or damaged wires are replaced;
2. Use only appropriately rated circuit breakers;
3. Never use extension cords as substitutes for wiring improvements;
4. Use only approved extension cords [i.e., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label];
5. Check wiring in hazardous locations where the risk of fire is especially high;
6. Check electrical equipment to ensure that it is either properly grounded or double insulated; and
7. Ensure adequate spacing while performing maintenance.

B. PORTABLE HEATERS

All portable heaters shall be approved by EHS Coordinator. Portable electric heaters shall have tip-over protection that automatically shuts off the unit when it is tipped over. There shall be adequate clearance between the heater and combustible furnishings or other materials at all times.

C. OFFICE FIRE HAZARDS

To prevent office fires, associates shall:

1. Avoid overloading circuits with office equipment;
2. Turn off nonessential electrical equipment at the end of each workday;
3. Keep storage areas clear of rubbish;
4. Ensure that extension cords are not placed under carpets; and
5. Ensure that trash and paper set aside for recycling is not allowed to accumulate

D. CUTTING, WELDING, AND OPEN FLAME WORK

The Maintenance Manager will ensure the following:

1. All necessary hot work permits have been obtained prior to work beginning (See Hot Work Program);
2. Cutting and welding are done by authorized personnel in designated cutting and welding areas whenever possible;
3. Adequate ventilation is provided;
4. Torches, regulators, pressure-reducing valves, and manifolds are UL listed or FM approved;
5. Oxygen-fuel gas systems are equipped with listed and/or approved backflow valves (flashback arrestors) and pressure-relief devices;
6. Cutting or welding is prohibited in sprinklered areas while sprinkler protection is out of service;
7. Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues or accumulations in confined spaces;
8. Cutting or welding is prohibited on metal walls, ceilings, or roofs built of combustible sandwich-type panel construction or having combustible covering;
9. Confined spaces such as tanks are tested to ensure that the atmosphere is not over ten percent of the lower flammable limit before cutting or welding in or on the tank;
10. Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding begins;
11. If possible, combustible materials are kept as least 35 feet from the point of operation; and

12. A fire watch is conducted during hot work and 30 minutes after the hot work concludes

E. FLAMMABLE AND COMBUSTIBLE MATERIALS

The Warehouse Manager shall regularly evaluate the presence of combustible materials at TPI Iowa. Materials used at TPI have various fire characteristics and obviously require specific care and handling for safe operations.

1. Class A Combustible Storage and Handling

These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in even non-specialized areas such as offices.

For Class A combustibles:

a. waste will be disposed of daily;
b. trash will be kept in receptacles and emptied daily or equipped with tight-fitting covers;
c. work areas will be kept clean and free of fuel paths that could allow a fire to spread;
d. combustibles will be kept away from ignition sources;
e. combustibles containing flammable or combustible liquids will be disposed of in metal bins with self-closing lids;
f. frequent inspections will be made to anticipate fires before they start; and
g. ABC dry chemical approved fire extinguishers will be used for Class A combustibles.

2. Class B Combustibles Storage and Handling

These include flammable and combustible liquids, flammable gases, and flammable aerosols. The use of these materials is incidental to TPI's principal business.

For Class B combustibles:

a. The maximum quantity of liquid allowed outside of an inside storage room or storage cabinet will be as follows:
    1. 25 gallons of Class IA liquid in containers
    2. 120 gallons of Class IB, IC, II or III liquids in containers
    3. 660 gallons of Class IB, IC, II or III liquids in a single portable tank.
b. Only approved pumps will be used to dispense liquids from the top of drums and barrels. If dispensed by gravity, an approved self-closing valve will be used;
c. Flammable liquids (or combustible liquids at temperatures above their flash points) will only be dispensed into a self-closing metal safety can that is bonded to the drum being dispensed from;

d. Drums dispensing flammable liquids (or combustible liquids at temperature above their flash points) will be electrically grounded and bonded to the safety can being dispensed to;
e. Flammable liquids will only be used as a cleaning agent from a self-closing container compatible with the liquid;
f. Class B combustibles will only be stored, handled, and used in approved locations where vapors will not reach ignition sources such as heating or electric equipment, open flames, and mechanical or electric sparks;
g. Class B combustibles shall not be used, handled or stored near exits, stairs, or any other means of egress; and
h. ABC dry chemical fire-extinguishing will be used for Class B combustibles.

F. SMOKING

In accordance with the Iowa Smoke Free Air Act, associates and visitors are not permitted to use tobacco products in any TPI building or TPI vehicles. Associates and visitors who wish to smoke must use only designated areas outside which have appropriate smoking waste disposal receptacles. All cigarettes must be deposited in appropriate smoking receptacles.

IV. TRAINING

The EHS Coordinator shall present basic fire prevention training to all associates upon employment, and shall maintain documentation of the training, which includes:

1. Review of 29 CFR 1910.38, this Fire Prevention Plan and the Plant's Emergency Action Plan, including where these documents are located and can be accessed;
2. Good housekeeping practices;
3. Portable fire extinguisher awareness;
4. Proper response and notification in the event of a fire;
5. Recognition of potential fire hazards; and

The EHS Coordinator shall train associates about the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Associates will receive this training:

1. At their initial assignment;
2. Annually; and
3. When changes in work processes necessitate additional training.

V. PROGRAM REVIEW

The EHS Coordinator shall review this Fire Prevention Plan at least annually for necessary changes.

Revision History

Prepared By	Rev	Date	Reason for Change
Craig Althof	A	1/7/2012	Initial Issue
Jim Bailey	B	8/6/2013	Review and update

1. Overview

In the course of business, TPI Iowa LLC (TPI) generates hazardous wastes. TPI has developed these instructions to meet the requirements of EPA 40 CFR 260 to 265.

2. Hazardous Waste Management

Materials are considered to be Hazardous Waste if they meet any of the following criteria:

I. They are listed by the U.S. Environmental Protection Agency in 40 CFR 261 Subpart D (a listed waste). (Note that some wastes are defined as "acutely hazardous waste" and therefore the quantity which can be temporarily stored on-site is limited. Section 2.2 provides more information).

II. They demonstrate ignitability, corrosively, reactivity, or toxicity as outlined in 40 CFR 261 Subpart C (a characteristic waste).

TPI's predominantly generated hazardous waste types are flammable liquids and flammable solids. A listing of TPI's routinely generated hazardous waste profiles are listed in Appendix A.

3. Handling Flammable Hazardous Wastes

Hazardous waste flammable liquids and solids are generated primarily from cleaning tools and equipment that comes in contact with paint and epoxy resin. These wastes are collected at or close to the point of generation in satellite accumulation containers . Employees are responsible for placing hazardous flammable wastes they generate into the proper satellite hazardous waste collection container.

When a satelliteaccumulation drum is full a Warehouse employee is contacted. The warehouse employee is responsible for closing (including labeling and dating) and immediately transferring the full drum to the plant's Hazardous Waste Storage area. The warehouse employee is also responsible for providing a properly prepared, empty satellite accumulation drum.

4. Hazardous Waste Storage Area

Hazardous waste is stored in a fire rated chemical storage building which is located outsideofthe northeast corner of the building. The storage building has a maximum storage capacity of 10 drums, is equipped with adequate secondary containment, a portable fire extinguisher, and spill cleanup materials. The building is kept locked and is only accessible by Warehouse employees.

5. Time Limits

TPI may keep hazardous wastes on site for no more than 90 days. However, the actual maximum amount of time hazardous waste is stored on site is typical less than 14 days.

6. Labeling Requirements

Each container must be labeled with the following information:

I. The words: "Hazardous Waste – Federal Law prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the US Environmental Protection Agency"
II. TPI's EPA Waste Number. **IAR005510156**
III. DOT proper shipping name.
IV. DOT Hazard Label.
V. Our Name and address: **TPI Iowa LLC.**
2300 N 33rd Avenue
Newton, IA 50208

Preprinted hazardous waste drum labels (containing all of the above information) are provided by hazardous waste disposal contractor for each type of hazardous waste generated by TPI.

7. Weekly Inspections

The Warehouse staff is responsible for inspecting the hazardous waste storage area every week. An inspection form has been set up and is located on a clipboard inside the hazardous waste storage building.

The inspection will include:

I. Inspector's initials
II. Time/date of inspection
III. Number of drums in storage
IV. Ensure drums are properly closed
V. Ensure no signs of leakage
VI. Confirm area is dry
VII. Note if there is evidence of spill and action taken to clean it up
VIII. Confirm proper labeling on drums, including an accumulation start date. Ensure labels are no further apart than 3 inches and are always visible for inspection.

Any issues should be addressed immediately and noted or reported to the EHS Coordinator. All completed forms are maintained by the Warehouse Supervisor.

8. Shipping Hazardous Waste

Hazardous waste may not be stored on site for a period of more than 90 days (beginning when the waste is placed in the hazardous waste storage area). The following are instructions on how to make arrangements to ship our hazardous waste. (Note: Only an employee trained to ship hazardous materials may do so):

I. Contact the Purchasing Department to schedule a pickup.
    a. If you have an unusual, one-time waste, contact the hazardous waste disposal contractor to obtain pre-approval prior to pick-up.
II. When the truck arrives, stand by and observe as all drums are loaded.
III. The driver will have new labels with him which he will place over our labels. These labels have more detailed information than ours about shipping names and UN numbers. They will also have a reference to the manifest number on each label, check that this is correct.
IV. Check the USEPA ID number and make sure that is correct – TPI's USEPA ID number is **IAR005510156**

V. Once the shipment is loaded, you will need to go over the paperwork with the driver. He will have two or three different forms – hazardous waste manifest, non-hazardous waste manifest and/or land ban restriction forms.

VI. Review the forms to ensure the information is correct before you sign.

VII. Once the paperwork is complete, ask the driver to placard the truck. This is the generator's (TPI's) responsibility under the law. Most of what we ship is flammable, so he should turn the placards on all four sides of his truck to the red number 3 flammable sign before he drives off. Watch him until he has left our property.

VIII. Forward the signed copies of all the paperwork to the EHS Coordinator
   a. Maintain the paperwork in the Hazardous Waste Manifest file.
   b. The disposal facility will mail a signed copy of the manifest back to TPI within 45 days. This manifest shall be filed in the Hazardous Waste Manifest file by the EHS Coordinator.

9. Record Keeping

Hazardous waste records will be kept indefinitely.

10. Reporting

Annual hazardous waste data is required to be submitted to EPA Region 7 on a biennial basis for odd numbered years.

11. Training

An annual review will be conducted for all employees involved in handling or overseeing the disposal of hazardous wastes. This is included in the TPI Employee Training Program.

12. Hazardous Waste Minimization

TPI continues to explore methods and make efforts to reduce the volume and toxicity of hazardous waste generated to the degree which has been determined to be economically practicable. We have also selected the most practicable methods of treatment, storage, or disposal currently available to us which minimize the present and future threat to human health and the environment.

Appendix A
Currently Approved Hazardous Waste Profiles

Waste Description	EPA Waste Code(s)	Hazard Class
Acetone	F003, D001	Flammable Liquid
Paint related materials	D001, D035, F003, F005	Flammable Liquid
Solvent contaminated rags	D001, F003	Flammable Solid
Epoxy Hardener	D002	Corrosive
Misc. Flammable Liquids	D001	Flammable Liquids

Revision History

Prepared By	Rev	Date	Reason for Change
Craig Althof	A	5/10/2012	Initial issue of document
David Lloyd	B	8/6/2013	Input from EPA

1. Overview

Large Quantity Generators of hazardous waste are required to prepare a formal written plan outlining specific steps that company personnel will take in response to spills, fires, and explosions or any unplanned release involving hazardous wastes which could threaten health or the environment. This document outlines TPI Iowa LLC Inc.'s (TPI) hazardous waste contingency plan.

2. Hazardous Waste

TPI presently generates over 6 different types of hazardous waste, 3 of which constitute more than 90% of TPI's total hazardous waste. These hazardous wastes are:

1. Waste paint related materials (flammable liquids)
2. Waste acetone (flammable liquids)
3. Waste solvent contaminated solid materials (e.g., acetone rags – flammable solids)

Hazardous waste is accumulated in satellite hazardous waste accumulation containers (55 gallon steel drums) stationed throughout the plant. Containers accumulating hazardous wastes that are characterized as flammable liquid (e.g., paint related materials and acetone) are individually stored in flammable liquid storage cabinets. Hazardous waste (full accumulation containers) is stored in a fire rated chemical storage building that is located outside of the northeast corner of the building. This building has a storage capacity of 10 drums, has a secondary containment in excess of 75 gallons, and is equipped with a portable fire extinguisher and spill containment materials. Hazardous waste storage is limited to 90 days, but is typically stored for a maximum of 14 days due to the availability of weekly hazardous waste pick-ups. The hazardous waste storage building is kept locked and is only accessible by authorized employees.

3. Emergency Coordinators

The Emergency Coordinators (EC) listed below are authorized to act as on-scene coordinators and to commit the necessary resources during an emergency. Actions taken by the emergency coordinator may include stopping processes and operations, collecting and containing waste, as well as removing or isolating containers. There shall always be at least one coordinator (primary or alternate) either on the company premises or on-call.

Emergency coordinators must be familiar with all aspects of the contingency plan, all operations and activities at the company, the locations and characteristics of wastes handled and stored, the location of all environmental records, and the physical layout of the company.

Emergency coordinators must be prepared to act quickly to protect employees while taking reasonable measures to ensure that fires, explosions, and/or releases do not occur, recur, or spread to other areas in the building. These measures shall include stopping processes and operations, collecting and containing released waste and removing or isolating containers.

The Emergency Coordinators at TPI Iowa LLC are:

Primary Coordinator	Address	Home Phone	Mobile Phone
Jim Bailey	[redacted]	[redacted]	[redacted] Ex. 6 PII

Alternate Coordinator	Address	Home Phone	Mobile Phone
Rich Myers	[redacted]	[redacted]	[redacted] Ex. 6 PII

To report a serious emergency requiring local police, fire, or medical support, **Dial 8 and then 911**

A dispatcher will answer your call. Describe the nature of the emergency and the location in the facility (front, back, right side, or left side of the building). When the emergency crew arrive, someone should meet them outside the building and direct them where needed.

4. Emergency Procedures

During an emergency involving hazardous wastes, the Emergency Coordinator will perform the necessary actions to insure a timely and appropriate response. The emergency coordinator shall choose the order and applicability of the following actions based upon the situation and the hazardous materials involved.

I. Identify and assess the situation with respect to source, health, area affected, and environmental impact.

II. Activate the appropriate level of alarm to notify all affected company personnel and contractors.

III. Evacuate the area or building as outlined in the emergency evacuation plan if necessary.

IV. Determine action to be taken and resources required. This may include containment and/or absorption.

V. Oversee the cleanup throughout its entirety

In the event of a spill of hazardous waste which presents risk of injury to health or environment or during an emergency where the facility must implement its contingency plan, the emergency coordinator must also notify the TPI Corporate EHS Engineer who will assume responsibility for making any subsequently necessary notifications (including reports) to the appropriate regulatory authorities The Corporate EHS Engineer will need the following information:

I. Date, time, and type of incident

II. Material and quantity involved

III. Extent of injuries, if any

IV. Assessment of actual or potential hazards to human health or the environment, if applicable

V. Estimated quantity and disposition of recovered material that resulted from the incident

Note: Keep in mind that absorbent materials like speedy dry and rags (even with minor contamination) must be considered as hazardous waste and must be handled in accordance with our normal hazardous waste handling procedures.

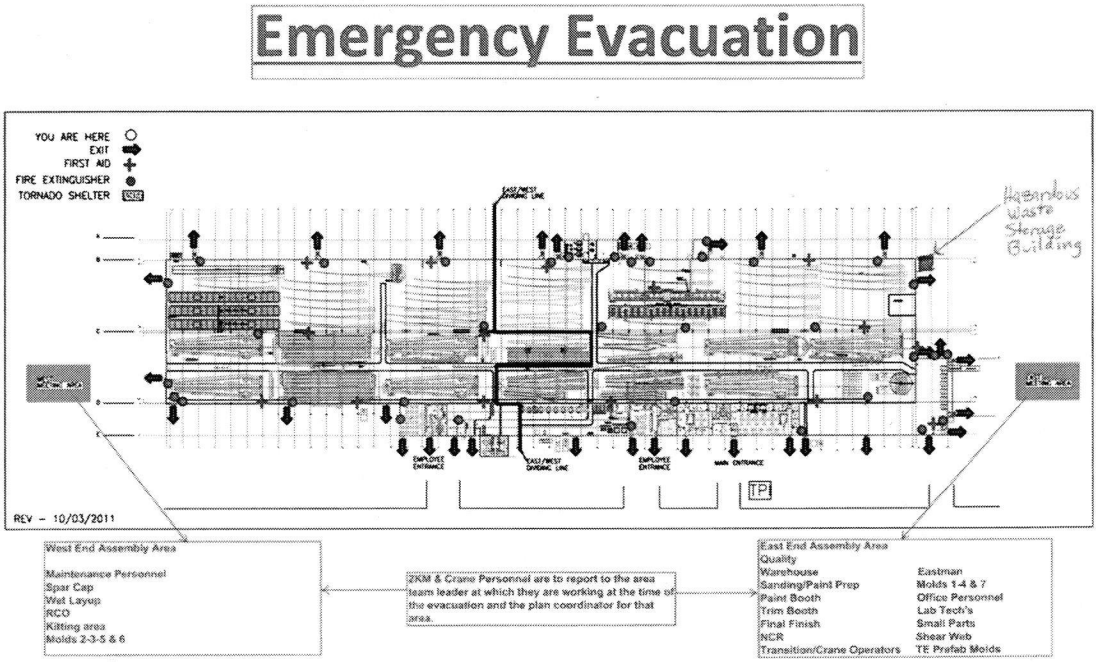
5. Emergency Equipment:

The following equipment must always be on site and in operating condition:

I. Alarm System
II. Phone System
III. Mobile telephones
IV. Fire Extinguishers-ABC type fire extinguishers are located throughout the plant
V. Sprinkler Systems-located throughout the building
VI. Spill Control Kits-Located in close proximity to satellite accumulation stations these kits are made up of items identified in the "One Plan" Table 1: Emergency Equipment
VII. Personnel Protection Equipment-This includes respirators, dust masks, gloves and tyvek suits
VIII. Exit Signs with emergency backup power.

6.Evacuation Routes:

In the event an emergency arises involving hazardous materials which requires the evacuation of the building, the alarm will sound. All employees, contractors and visitors must exit the building through the nearest exit as outlined in the Emergency Action Plan (EHS 003). Once outside the building, all employees should group at their designated evacuation assembly area and wait for further instruction.



8. Arrangements

The Newton Fire Department acts as our primary emergency response team as well as the Newton Police Department. Additional resources during emergencies are listed in the "One Plan." Each department or agency is provided with a current copy of this plan. TPI works with local responders annually to assure they are prepared to respond to any emergency incidents at the plant.

Revision History

Prepared By	Rev	Date	Reason for Change
Craig Althof	A	5/10/2012	Initial issue
David Lloyd	B	8/6/2013	Input from EPA